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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,554	10/18/2001	Kenji Kashiwagi	ASA-1038	5072
7590 08/05/2005 MATTINGLY, STANGER & MALUR, LLC ATTORNEYS AT LAW 1800 DIAGONAL ROAD, SUITE 370 ALEXANDRIA, VA 22314			EXAMINER EMDADI, KAMRAN	
			ART UNIT 2667	PAPER NUMBER

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

80

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/978,554	KASHIWAGI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kamran Emdadi	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26-31 and 33-36 is/are rejected.
- 7) ☒ Claim(s) 25 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 11, the phrase "to be used" in both claims 1 and 11 is indefinite. The phrase is deficient for failing to establish an implied use for how the band is use. Subsequent dependent claims 2-7 and 12-17 are also rejected by virtue of their dependency thereon.

Regarding claim 9, the phrase "the first frequency band to be used is reset to a second frequency band to be used" is indefinite. The Examiner does not understand how the first band can be reset to a second frequency band, in other words it is unclear what is being reset.

Regarding claim 10, the phrase "the first frequency band to be used to the an other wireless device" is indefinite. The Examiner does not understand what the first band is doing with respect to the other wireless device.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11-23, 29-31 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Ahmadi et al. (U.S. Patent No. 5,870,385).

Regarding claims 1, 8, 11 and 18 Ahmadi teaches a telecommunications network that includes a wireless LAN wired to a plurality of base stations (see figure 5). The network includes a controller 110 that assigns frequency hopping patterns of M frequencies  $f(k,1) \dots (fk,M)$  to a unique base station (see column 11, lines 25-30 and 55-67 and column 12, lines 35-45). The frequency hopping patterns are different (see figures 6 and 10) and are based on a coverage area of the base station maintained via distance tables (see figure 12 and column 13, lines 58-67).

Regarding claims 19, 29 and 36, Ahmadi teaches finding frequency bands that belong to a predetermined frequency hopping band (see column 11, lines 55-64) and assigning a frequency hopping pattern not used by a neighboring base station to a base station (see column 11 line 65 – column 12 line 4).

Regarding claims 2 and 12, Ahmadi teaches a second base station (see figure 5).

Regarding claims 3, 5, 13 and 15, Ahmadi teaches the controller handling the assigning of a second frequency band to a second base station (see figure 11 and column 10 line 56 – column 11 line 16).

Regarding claims 4 and 14, Ahmadi teaches a first device and a base station communicating (see figure 5).

Regarding claims 6 and 16, Ahmadi teaches storing various types of information in a network topology directory 230 and accessing the information via the controller, where the information included in the directory includes frequency band information (see figure 12).

Regarding claims 7, 17 and 21, Ahmadi teaches direct sequence (see column 12, lines 2-8).

Regarding claims 20 and 30, Ahmadi teaches finding frequency bands that belong to a predetermined frequency hopping band by scanning the frequencies used by neighboring base stations (see column 11 line 65 – column 12 line 4).

Regarding claims 22 and 31, Ahmadi teaches setting up tables that contain information of other devices and frequencies used (see figure 12).

Regarding claim 23, Ahmadi teaches sending the tables that contain information to the base stations (see the communication between the database 109 and the wireless control agent's of the base stations in figure 5).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadi in view of Kockman et al. (U.S. Patent No. 6,909,737).

Ahmadi teaches all of the above noted features, however, the teachings of Ahmadi are silent regarding updating tables based on tables received from neighboring base stations, and discovering that a previously assigned frequency band is already in use by a neighboring base station and re-assigning that frequency band to avoid interference. Kockman teaches a method of re-assigning a frequency for a spread spectrum communications system. The system includes a means for replacing a disturbed carrier frequency (see column 3, lines 30-34), where the disturbed frequency is due to occupancy by another transmitter (see column 6, lines 40-45). Further, updating tables with the appropriate information (see column 3, lines 53-55).

Motivation to combine these two references is evident from the background portions of their respective specifications. For instance, Ahmadi discloses the need for efficient frequency assignment techniques to mobile users (see column 1, lines 10-25). Similarly, Kockman teaches a frequency hopping method that utilizes a plurality of carrier frequency assignment operations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined these two references to arrive at the features described in claims 28 and 35.

Claims 26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadi in view of Kojiro (U.S. Patent No. 6,356,540).

Ahmadi teaches all of the above noted features, however, the teachings of Ahmadi are silent regarding indicating to a base station that no frequency bands are available for allocation. Kojiro teaches a method allocating frequency carriers for a

communications system. The system includes a means for rejecting a request for a frequency band when no slots are available (see column 6, lines 40-45).

Motivation to combine these two references is evident from the background portions of their respective specifications. For instance, Ahmadi discloses the need for efficient frequency assignment techniques to mobile users (see column 1, lines 10-25). Similarly, Kojiro teaches a frequency allocation method that obtains a high level of frequency use efficiency (see column 2, lines 35-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined these two references to arrive at the features described in claims 26 and 33.

Claims 27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadi in view of Kojiro and further in view of Naddell et al. (U.S. Patent No. 5,613,213).

Ahmadi and Kojiro teach all of the above noted features, however, the teachings of these two references are silent regarding a visual output indication of unavailable frequencies. indicating to a base station that no frequency bands are available for allocation. Naddell teaches a displaying mechanism for a communications system. The system includes a means for displaying a variety of services and/or a lack thereof (see figures 1-2).

Motivation to combine Naddell with these other two references is evident from the multi-purposes intended from the services of the RF communications system of Naddell. The system disclosed in Naddell could be effectively implemented in either of

these two references with a reasonable expectation of success given the familiar environment displayed in figure 1 of Naddell in comparison to the systems disclosed in the other two references. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined these three references to arrive at the features described in claims 27 and 34.

### ***Allowable Subject Matter***

Claims 25 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claims 25 and 32 contain allowable subject matter because nowhere in the prior art cited to record teaches of the specific frequency band and the specific number of bands in combination with the features present in the parenting claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamran Emdadi whose telephone number is 571-272-6047. The examiner can normally be reached M-F between the hours of 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.




Art Unit: 2667

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kamran Emdadi

August 3, 2005

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER  
8/3/05